

What is Claimed Is:

1. A method in a physical layer transceiver coupled to a prescribed network medium having an undetermined length, the method comprising:

supplying a prescribed initial set of equalizer settings to a digital feedforward equalizer, the digital feedforward equalizer configured for outputting equalized signal samples based on equalizing
5 retrieved signal samples, having encountered intersymbol interference by transmission via the prescribed network medium, according to supplied equalizer settings;

comparing the equalized signal samples relative to a prescribed equalization threshold; and
selectively changing the supplied equalizer settings, based on the comparing step, until the equalized signal samples reach the prescribed equalization threshold.

2. The method of claim 1, wherein the supplying step includes supplying the prescribed initial set of equalizer settings based on a predetermined characterization of the prescribed network medium at a prescribed length.

3. The method of claim 2, wherein the selectively changing step includes successively supplying groups of equalizer settings based on the predetermined characterizations of the prescribed network medium at successively changing lengths, respectively.

4. The method of claim 3, wherein the comparing step includes:
generating a count interval representing reception of a statistically-based prescribed number of signal samples;

first determining, within the count interval, a first number of the equalized signal samples
5 having an absolute value that exceeds a first reference level representing a location where a statistically substantial number of the data values representing a symbol absolute value of "1" should occur for an equalized signal; and

second determining whether the first number reaches the prescribed equalization threshold, the prescribed equalization threshold representing an expected number of detected signal samples that
10 exceed the first reference level within the count interval.

5. The method of claim 1, wherein the comparing step includes:
generating a count interval representing reception of a statistically-based prescribed number of signal samples;

first determining, within the count interval, a first number of the equalized signal samples
5 having a first absolute value that exceeds a first reference level representing a location where a statistically substantial number of the data values representing an absolute symbol value of "1" should occur for an equalized signal; and

second determining whether the first number reaches the prescribed equalization threshold, the prescribed equalization threshold representing an expected number of detected signal samples that
10 exceed the first reference level within the count interval.

6. A physical layer transceiver configured for retrieving signal samples from a prescribed network medium having an undetermined length, the physical layer transceiver comprising:

a digital feedforward equalizer configured for generating equalized signal samples from the
5 retrieved signal samples and based on supplied equalizer settings, the retrieved signal samples having encountered intersymbol interference by transmission via the prescribed network medium; and

an equalizer controller configured for supplying the supplied equalizer settings to the digital feedforward equalizer, the equalizer controller configured for supplying a prescribed initial set of equalizer settings and comparing the equalized signal samples, having been generated based on the
10 initial set of equalizer settings, relative to a prescribed equalization threshold, the equalizer controller configured for selectively changing the supplied equalizer settings until the equalized signal samples reach the prescribed equalization threshold.

7. The transceiver of claim 6, wherein the equalizer controller includes a coefficients generator configured for outputting the prescribed initial set of equalizer settings and the selectively changed equalizer settings based on a predetermined characterization of the prescribed network medium at respective prescribed lengths.

8. The transceiver of claim 7, wherein the equalizer controller further comprises a controller state machine configured for asserting an initial signal at initialization of the digital feedforward equalizer and a change signal based on a comparison result between the equalized signal samples and the prescribed equalization threshold, the coefficients generator configured for outputting
5 a corresponding group of equalizer settings representing a successively changing network medium length in response to each corresponding assertion of the change signal.

9.

The transceiver of claim 8, wherein the equalizer controller further comprises:

a timer configured for generating a count interval representing reception of a statistically-based prescribed number of signal samples;

5 a counter configured for determining, within the count interval, a first number of the equalized signal samples having an absolute value that exceeds a first reference level representing a location where a statistically substantial number of the data values representing a symbol absolute value of "1" should occur for an equalized signal; and

10 a comparator configured for outputting an equalization status signal based on whether the first number reaches the prescribed equalization threshold, the prescribed equalization threshold representing an expected number of detected signal samples that have an absolute value exceeding the first reference level within the count interval, the controller state machine selectively asserting the change signal based on the equalization status signal.

10002187 120501